

Patent claims

1. A procedure for measuring distance between a distance sensor (5) which is carried, in particular, by a motor vehicle (1) and an object (2) by emitting electromagnetic impulse signals (6) and by receiving signals (7) which are reflected by the object (2), whereby the signal (7) which is reflected by the object (2) comprises a related sequence of pulses (10), each pulse (10) being discretised in order to attain a sensed pulse (14), and the sensed pulses (14) being added together characterised in that a modulation signal (18) is superimposed onto the received pulses (10) prior to discretisation and addition.
2. A procedure according to claim 1 whereby the modulation signal (18) comprises a specified and, during a related sequence of pulses (10), constant amplitude distribution.
3. A procedure according to claim 2 whereby the modulation signal (18) is distributed uniformly in terms of time, and its amplitude corresponds to a quantisation level (13) during discretisation of the received pulses, or to an integral multiple of such a quantisation level.
4. A procedure according to claim 3 whereby the number of the sensed pulses (14) which belong together and the number of quantisation levels (13) which are superimposed with the modulation signal (18) coprimes.
5. A procedure according to any one of claims 1 to 4 whereby an unbiased modulation signal (18) is used.

6. A procedure according to any one of claims 1 to 5 whereby the modulation signal (18) is a sawtooth signal.
7. A procedure according to claim 1 whereby the quantisation levels (13) are displaced or scaled subject to a modulation signal (18) according to any one of claims 2 to 6.
8. A procedure according to claim 1 whereby the received pulses (10) are scaled subject to a modulation signal (18) according to any one of claims 2 to 6.
9. A procedure according to claim 1 whereby the phases of the received pulses (10) are displaced subject to a modulation signal (18) according to any one of claims 2 to 6.
10. A procedure according to claim 1 whereby the time location of the emitted impulse signals (6) and/or the signal propagation time is varied, subject to a modulation signal (18) according to any one of claims 2 to 6.
11. A device for carrying out a procedure according to any one of claims 1 to 10, with a distance sensor (5) which can in particular be carried by a motor vehicle (1) with a transmitter (3) and a receiver (4), the transmitter (3) being equipped with electromagnetic impulse signals (6) for transmitting purposes, and the receiver (4) being equipped with a means of modulation for superimposing a modulation signal (18) onto the received pulse (10) in order to receive signals (7) which are reflected by an object (2) in the form of a

related sequence of pulses (10), with means of discretisation for discretising each pulse (10) in order to attain a sensed pulse (4) and to add together the sensed pulses (14).